(No Model.)

2 Sheets—Sheet 1.

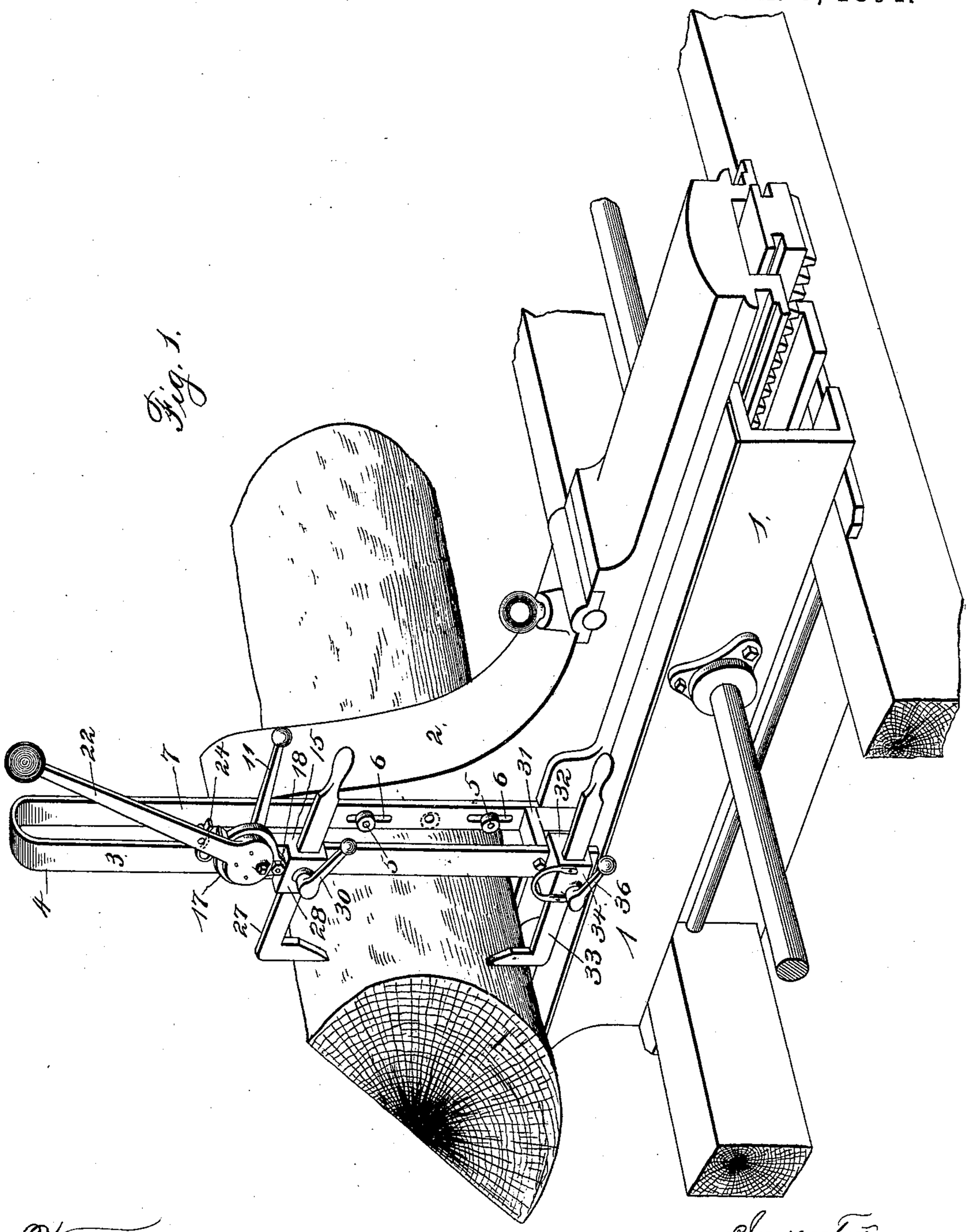
G. W. LOVRIEN.

DUPLEX SAWMILL DOG.

No. 512,586.

Patented Jan. 9, 1894.

Fig. 1.



Witnesses:
John Enders jr.
W. J. Stanley.

Inventor:
George W. Lovrien
by
Higdon Higdon & Congar
Att'ys.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

G. W. LOVRIEN.

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Fig. 2.

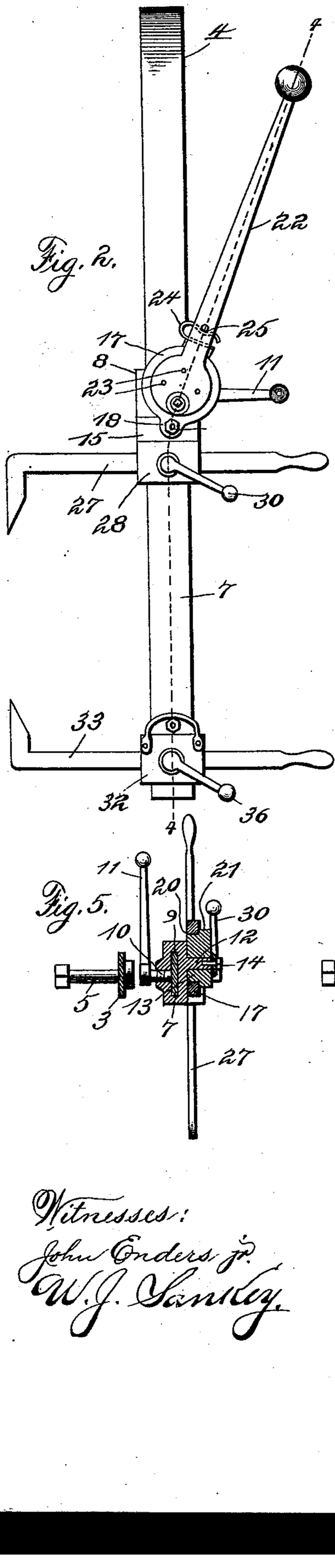

Fig. 3.

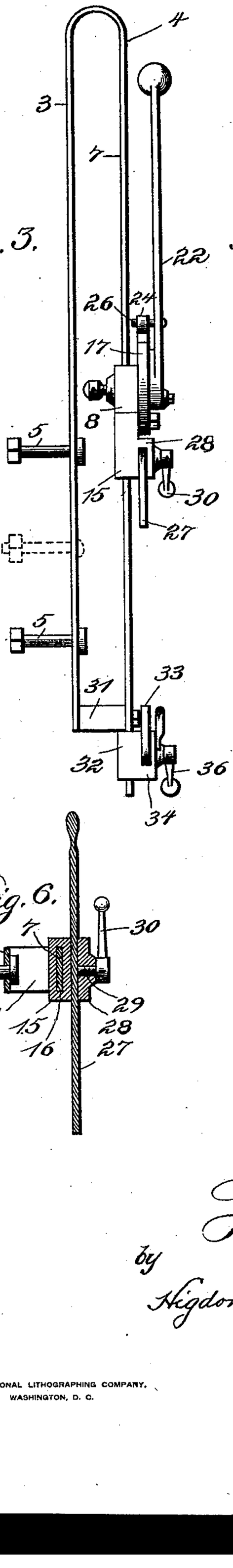

Fig. 4.

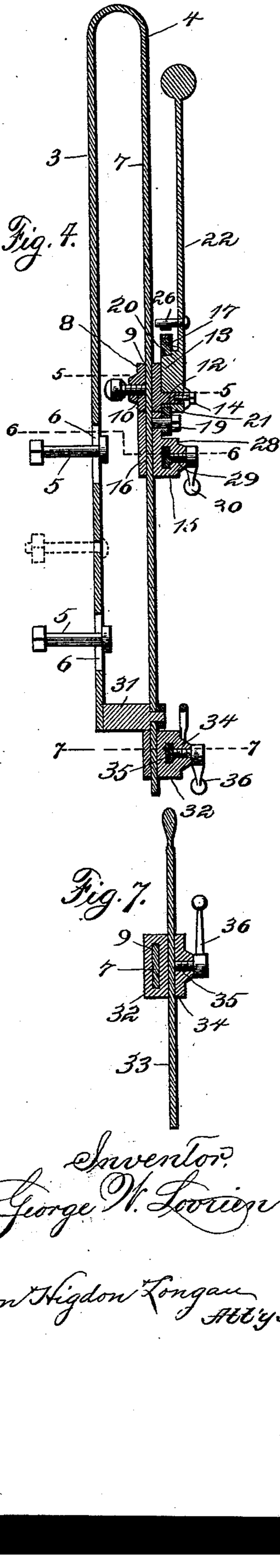

Fig. 5.

Fig. 6.

Fig. 7.

Witnesses:
John Enders jr.
W. J. Sankey.

Inventor:
George W. Lovrien
by
Higdon Higdon Longan
Attys.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE W. LOVRIEN, OF JACKSON, TENNESSEE, ASSIGNOR TO THE SOUTHERN ENGINE AND BOILER WORKS, OF SAME PLACE.

DUPLEX SAWMILL-DOG.

SPECIFICATION forming part of Letters Patent No. 512,586, dated January 9, 1894.

Application filed September 4, 1893. Serial No. 484,706. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. LOVRIEN, of Jackson, county of Madison, State of Tennessee, have invented certain new and useful Improvements in Duplex Sawmill-Dogs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in duplex sawmill dogs and consists in the novel arrangement, combination and construction of parts as will be more fully hereinafter described and designated in the claim.

The invention relates especially to that class of saw-mill dogs in which the sliding-head is mounted upon a vertical slide-bar carried by the knee of the head-block and in which the dog-bit is adjustably mounted upon said sliding-head.

The object of my invention is to provide an improved dog of the style above mentioned, which shall be very simple in construction, of low cost, and in which the dog-bits may be very quickly and securely adjusted for different sizes of timber.

In the drawings: Figure 1 is a perspective view showing my invention applied to a head block as required for practical use. Fig. 2 is a side elevation of my invention showing it detached from the head block. Fig. 3 is a side elevation of Fig. 2. Fig. 4 is a vertical section of the same taken on the line 4—4 of Fig. 2. Fig. 5 is a cross-section taken on the line 5—5 of Fig. 4. Fig. 6 is a like section taken on the line 6—6 of Fig. 4 looking downward from said line. Fig. 7 is a cross-section taken on the line 7—7 of Fig. 4.

1 indicates the usual head-block having a vertical sliding-knee 2.

The lower portion of one leg 3 of an inverted U-shaped bar 4 is secured to one side of the knee 2 by means of bolts 5 or other fastening, so as to be held in a vertical position and travel with said knee, the said fastening passing through vertical slots 6 formed in said leg. The other leg 7 projects at one side of the leg 3 and extends parallel therewith. Each of these legs is preferably wide and thin and rectangular in cross-section.

8 indicates a locking head having a vertical passage 9 therethrough and mounted upon the leg 7 of the bar 4, said leg engaging said vertical passage of said head. This passage is also rectangular in cross-section and corresponds in size to the cross-section of said leg so that said head may be freely moved up and down upon said leg and be held in a vertical position. This head may be set and secured at any desired point in the length of the leg 7 by means of a set screw 10 threaded through the inner wall of said head and engaging the inner surface of the leg 7 to lock and release said head. The set screw 10 is provided with a lever 11 which is located between the two legs of the bar 4 so that its free end will project to a convenient position within reach of the operator. Projecting from the outer surface of the head 8 is a horizontal pin or journal 12 upon which is revolubly mounted an eccentric disk 13 the same being retained in position by means of a screw or bolt 14 being threaded into said pin or journal so that said head projects beyond the periphery of said journal and overlaps the outer adjacent portion of said eccentric disk.

Mounted upon the leg 7 beneath the head 8 and adjacent to said head is a sliding block 15 having a vertical passage 16 therethrough and mounted upon the leg 7 of the bar 4, said leg engaging said vertical passage of said head. This passage is also rectangular in cross-section and corresponds in size to the cross-section of said leg, so that said head may be freely moved up and down upon said leg and be held in vertical position and be guided in its movement thereon.

An eccentric strap or ring 17 is mounted upon the eccentric disk 13 of the periphery and is provided with a perforated projecting ear 18 which engages the pin or journal 19 projecting from the outer surface of the block 15, and thereby connecting said block with the head 8. The strap or ring 17 is mounted in an annular or peripheral groove 20 formed in the central disk 13 so that the inner side of said ring rests in contact with the head 8 and the block 15 and is retained in such position by a peripheral flange 21 formed on said disk. The eccentric disk 13 is rocked or revolved upon the pin or journal 12 of the head 8 by a hand lever 22. The inner end of said hand lever is rigidly fixed to said disk

by means of suitable rivets 23 or other fastenings, so that the free end of said hand lever will project to a point convenient for the operator. The periphery of the ring 17 is provided with a spring 24 bent in a U-shape, one end of which is fixed to said ring and the other end provided with a depression 25 that it may be engaged by a pin 26 connected to the hand lever 22. The purpose of this spring will be hereinafter mentioned.

27 indicates a dog-bit of ordinary construction which is adjustably mounted in a horizontal socket 28 carried by the sliding-head 15. A suitable set screw 29 is threaded into the outer side of said socket and engages said bit to lock the same in the desired position. Said set screw is provided with a hand lever 30.

The lower ends of the legs 3 and 7 are connected together by a block 31. The leg 7 projects a suitable distance below said block and the head 32 is rigidly connected thereto. Horizontally located in said head and parallel with the dog-bit 27 is another dog-bit 33 of like form which is adjustably mounted in a horizontal socket 34 carried by said head. A suitable set screw 35 is threaded into the outer side of said socket and engages said bit to lock the same in the desired position. This set screw is provided with a hand lever 36 so that it can be readily operated without a wrench.

The operation is as follows: By manipulating the set screws 35 and 29 by the levers 26 and 30 the dog-bits 27 and 33 may be adjusted horizontally in their sockets. For a large piece of timber or log the locking head, the block 15 and the parts carried thereby are slid upward upon the plate simultaneously so as to bring the bit 27 a suitable distance above the bit 33 to engage said large timber. Likewise when a similar timber is to be operated upon these parts are simultaneously slid downward a suitable distance so that the dog bit 27 may engage said log. The head 8 is released or locked by turning the set screw 10 by means of the handle 11. After the desired adjustments of the parts upon the leg 7 have been effected and the timber has been placed in position upon the head block 1 the bit 27 may be forced downward into said timber by simply moving the free end of the hand lever 22 downward, thereby rotating the eccentric disk 13 in the ring 17 and rotating said disk upon the journal 12 which has the effect of moving the block 15 a corresponding distance and this downward movement of said block causes a corresponding movement of the dog bit 27 which is carried by said block. When the bit 27 engages the log by the means hereinbefore stated and the vertical legs 3 being loosely connected to the side of the knee 2 of the head block 1, it will raise said leg upward, the slots 6 allowing this operation. By the legs sliding upward it will bring the dog-bit 33 also in engagement with the log which is to be operated upon. The spring 24 hereinbefore described is for the purpose of holding the hand lever 22 in an upward position, while the same is not in use.

What I claim is—

An improved saw-mill-head 1, constructed with a knee 2, a vertical bar 4 bent so as to form legs 3 and 7 the lower adjacent ends of said legs rigidly connected together, a leg 7 constructed with slots 6 so that it can vertically slide on bolts 5 which secure it to said knee, a head connected to the lower projecting end of the leg 7 and carrying a dog-bit 33, a head 15 and a head 8 connected to said leg, so that they can vertically slide on said leg, a lever 11 so constructed that the head 8 can be readily made rigid with said leg, a cam connected to the head 8, a collar or ring located on said cam, and an ear formed on said ring and constructed to engage the block or head 15 so that when the lever 22 is manipulated it will vertically reciprocate said head, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. LOVRIEN.

Witnesses:

W. D. NELSON,

R. H. STOVAL.